

Appendix D - Terrestrial Wildlife Species Review Process

Potential Species of Conservation Concern and Potential Species of Public Interest

Introduction

The Flathead National Forest (Flathead NF) Land and Resource Management Plan Revision (i.e., Plan Revision) is conducted in three phases: 1) assessing the existing environmental conditions and trends using available information, 2) developing a proposed forest plan, and 3) conducting an environmental analysis of the effects of the proposed forest plan and a range of alternatives to that plan. The *National Forest System Land Management Planning Final Rule and Record of Decision* (i.e., 2012 Planning Rule) detailed in 36 *Code of Federal Regulations* [CFR] § 219, provides direction for the U.S. Forest Service planning effort.

For Phase 1, the assessment, terrestrial species known to be native to the Flathead NF were assessed to see if they fit into one of the categories below, as directed and defined by the 2012 Planning Rule:

- Species federally listed as threatened or endangered species (TES), proposed or candidate TES species: On the Flathead NF, these species include the grizzly bear, Canada lynx, and wolverine (U.S. Department of Interior Fish and Wildlife Service (USDI FWS) 2014).
- Species of Conservation Concern: As stated on page 21265 of the 2012 Planning Rule: potential terrestrial wildlife species of conservation concern (SCC) are any species “other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species’ capability to persist over the long-term in the plan area” (36 CFR §219.9; FSH 1909.12 Chapter 10, part 12.52). Species with a positive 90-day finding on a petition to list, those delisted in the last 5 years, or those delisted species for which continued monitoring is required are also included in this category (FSH 1909.12, Chapter 10, part 12.52). The list of SCC is identified by the Regional Forester in coordination with the Flathead NF supervisor. For the assessment, the list of terrestrial SCC is purposefully called a “*potential SCC*” list, because the list can be refined to add or remove species as Forest Service staff progresses through the plan revision process. The screening process used to determine potential SCC is described in the “*Species Screening Process*” section.
- Species to be considered as Species of Public Interest (SOPI, 36 CFR § 219.6; FSH 1909.12 Chapter 10, part 13.35) must meet one or more of the following criteria:
 - Fish, wildlife and plant species commonly enjoyed and used by the public for hunting, fishing, trapping, gathering, observing, or sustenance
 - The conditions and trends in the plan area are associated with these species
 - The use and enjoyment of these species contributes to social and economic sustainability.
- Focal species: This group of species is defined as “A small subset of species whose status permits inference to the integrity of the larger ecological system to which it belongs and provides meaningful information regarding the effectiveness of the plan in maintaining or restoring the ecological conditions to maintain the diversity of plant and animal communities in the plan area. Focal species would be commonly selected on the basis of their functional role in ecosystems” (36 CFR § 219.19). These species can be “efficiently” and “effectively” monitored. The list of these species is developed later in the planning process.

In phase 2 of the Plan Revision, coarse filter and fine filter plan components are developed for ecosystems and select species. The components include desired conditions, objectives, guidelines, and standards based upon the suitability of lands, and actions that are within the Forest Service’s capability to manage.

Process and methods

The assessment was conducted to address the following key questions:

- What are the ecological communities or ecosystems associated with terrestrial wildlife species on the Flathead NF and what are the key ecosystem characteristics?
- How are the principal ecological and human processes affecting the composition, structure, and distribution of these ecological communities on the Flathead NF?
- What are the opportunities to conserve or enhance ecosystems and their associated wildlife?
- Which species fit into the categories listed above and will be discussed in more detail in the assessment?

Information Sources

A variety of sources were then used to assess species status specifically within the Flathead NF. Local knowledge was gathered from other agency scientists (e.g., Montana FWP Region 1 biologists, Glacier National Park (NP) biologists, and tribal biologists) as well as members of the public knowledgeable about local species (e.g., Flathead Audubon Society members, American Bird Conservancy personnel (Casey 2000, Casey pers. comm. 2013), Owl Research Institute personnel, local furbearer trappers). This additional information was used to further refine the list of potential SCC and SOPI.

Species information was gathered at multiple scales. First, the Montana Natural Heritage Program (MTNHP) database was queried (Coleman, K. 2013) to provide the Flathead NF with data on all species known to occur within the boundaries of the Flathead NF geographic areas (GAs) (figure D-1). Data was compiled for each of these species including their global and state NatureServe ranking (table D-1), whether or not the species is considered to be native or accidental on the Flathead NF, and the percent of Montana that is within the breeding range of the species. For birds, additional information included the Montana Partners in Flight (PIF) ranking and whether or not the species is identified as a bird of conservation concern or as a bird with a significant downward trend in the bird conservation region (BCR) encompassing the Flathead NF (i.e., BCR10)(figure 2). In addition, the Flathead NF considered information from the MTFWP Statewide Wildlife Action Plan (SWAP, MTFWP 2014). The MTNHP data was used to determine whether or not there were/are observations of Tier 1 species within the Flathead NF GA (encompassing all ownerships) and also whether or not there was/is occurrence on Flathead NF lands. To be considered for inclusion as potential SCC by the Forest Service, the species must be native and have occurrences on National Forest System (NFS) lands within the plan area (FSH 1909.12, Chapter 10, section 12.52).

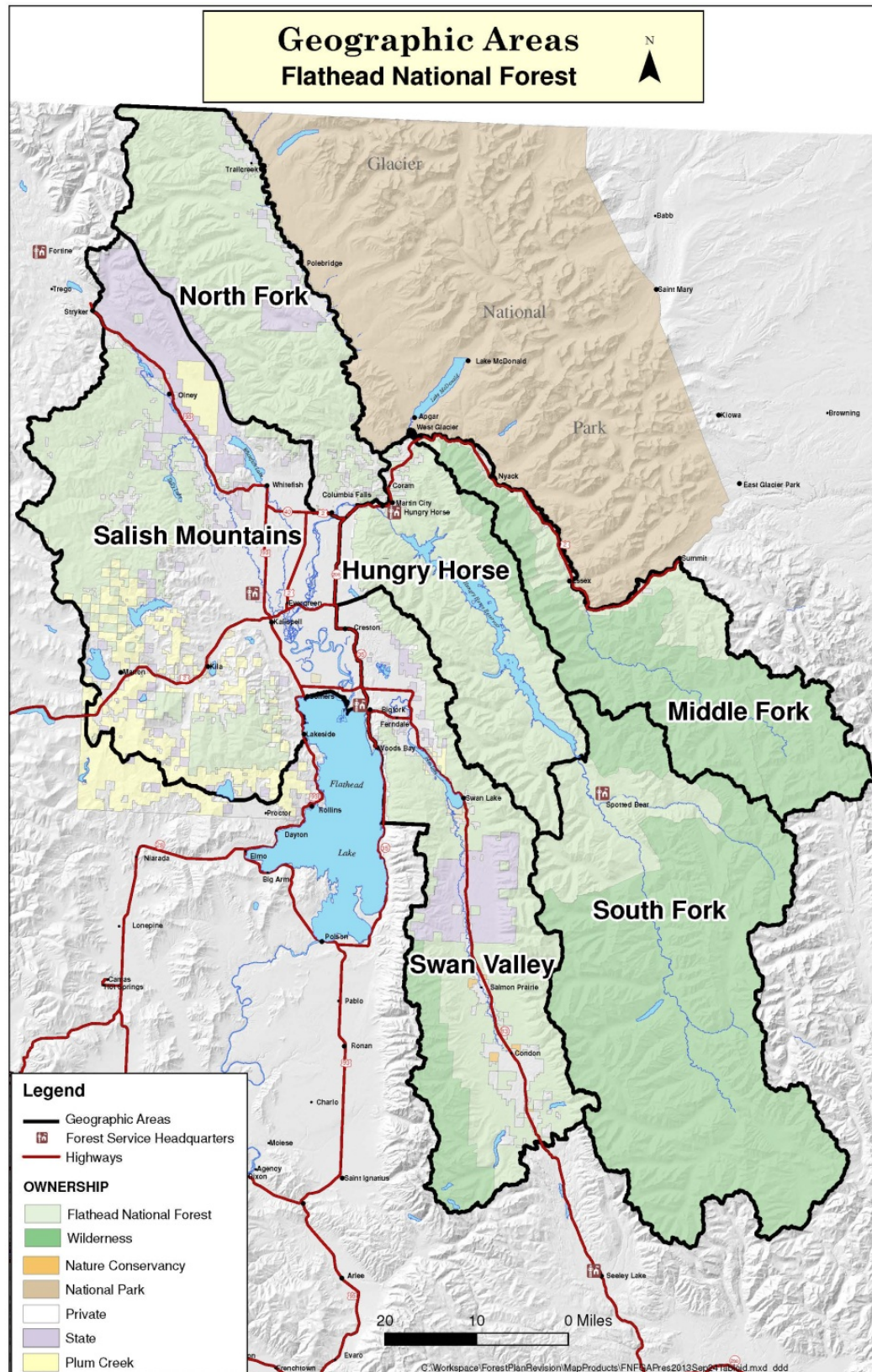


Figure D-1. Geographic Areas of the Flathead NF

Species Screening Process

The list of Forest Service potential SCC is based upon criteria established in the 2012 Planning Rule (Federal Register / Vol. 77, No. 68 / Monday, April 9, 2012 / Rules and Regulations) and Forest Service draft directives (2013).

Consistent with FSH 1909.12, Chapter 10, section 12.52 and CFR § 219.9(b)(3), the following global (G) and Montana state (S) NatureServe conservation rankings for each species were considered (table D-1).

Table D-1. Global and Montana state species rankings

Ranking		Definition
Global	State	
G1	S1	At high risk because of extremely limited and/or rapidly declining population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation in the state.
G2	S2	At risk because of very limited and/or potentially declining population numbers, range and/or habitat, making it vulnerable to global extinction or extirpation in the state.
G3	S3	Potentially at risk because of limited and/or declining numbers, range and/or habitat, even though it may be abundant in some areas.
G4	S4	Apparently secure, though it may be quite rare in parts of its range, and/or suspected to be declining.

Findings

None of the terrestrial wildlife species known to occur on the Flathead NF were found to have a global ranking of G1 or G2. The following S1-S2 species are native, are known to occur on NFS lands, and were considered for potential SCC designation:

- Black swift
- Harlequin duck
- Gray-crowned rosy finch.

S3 species were considered if there was/is scientific information showing the species is in decline or at risk on Flathead NFS lands. It should be noted that Forest Service SCC designation is not the same as MTNHP species of concern (SOC) designation. Species with a MTNHP ranking as SOC were also considered, as defined, “Native taxa that are at-risk due to declining population trends, threats to their habitats, restricted distribution, and/or other factors. Designation as a Montana Species of Concern or Potential Species of Concern is based on the Montana Status Rank, and is not a statutory or regulatory classification. Rather, these designations provide information that helps resource managers make proactive decisions regarding species conservation and data collection priorities.”

Information from the MTFWP Statewide Wildlife Action Plan

The MTFWP SWAP identified geographic focus areas and associated species that are in the greatest need of conservation (ranked as Tier 1). Two of the geographic focus areas identified are located within the core of

the Flathead NF: 1) the Flathead River Valley focus area and 2) the Mission/Swan Valley and Mountains focus area (MTFWP 2014).

Flathead River Valley Focus Area

This focus area includes the main stem of the Flathead as well as the Stillwater and Tobacco rivers. The Forest Service manages 6.8 percent of the Flathead River Valley focus area. The primary natural disturbances to species in this focus area are identified as fire as well as flooding and beaver activity (in riparian and wetland areas). Land use is predominantly agriculture and extensive rural/suburban development on private lands, with timber harvest on public and to a greater degree, private lands.

There are a total of 344 terrestrial vertebrate species that are found within the Flathead River Valley focus area, with Tier I species as follows:

- Amphibians: western toad and northern leopard frog
- Birds: Common loon, Trumpeter swan, Bald eagle, Columbia Sharp-tailed grouse, Long-billed curlew, Black tern, Flammulated owl, Black-backed woodpecker, and Olive-sided flycatcher
- Mammals: Townsend's Big-eared Bat, Northern Bog Lemming, Grizzly Bear, Gray Wolf, and Canada Lynx.

Native species listed above that have observations on NFS lands within the Flathead NF plan area include: western toad, Common loon, Bald eagle, Flammulated owl, Black-backed woodpecker, Olive-sided flycatcher, Townsend's Big-eared Bat, Northern Bog Lemming, Grizzly Bear, Gray Wolf, and Canada Lynx.

Mission/Swan Valley and Mountains Focus Area

The Forest Service manages about 55 percent of the land in this focus area, which includes the Swan River. The primary natural disturbances to species in this focus area are identified as fire, insects, and windthrow. Land use is predominantly resource management and outdoor recreation, with relatively dispersed rural and suburban development in the valleys. There are a total of 246 terrestrial vertebrate species that are found within the Flathead River Valley focus area, with Tier I species as follows:

- Amphibians: western toad
- Birds: Common loon, Trumpeter swan, Harlequin duck, Bald eagle, Flammulated owl, Black-backed woodpecker, and Olive-sided flycatcher
- Mammals: Townsend's big-eared bat, hoary marmot, northern bog lemming, gray wolf, grizzly bear, and Canada lynx.

Native species listed for the two focus areas above that have observations on NFS lands within the Flathead NF plan area include: western toad, Common loon, Bald eagle, Harlequin duck, Flammulated owl, Black-backed woodpecker, Olive-sided flycatcher, Townsend's big-eared bat, hoary marmot, northern bog lemming, grizzly bear, gray wolf, and Canada lynx.

Tier 1 species listed for both focus areas were considered for potential SCC designation. With the exception of the western toad, Olive-sided flycatcher, Black-backed woodpecker and hoary marmot, all of these Tier 1 species are recommended as potential SCC on the Flathead NF. The western toad, Olive-sided flycatcher, Black-backed woodpecker and hoary marmot are recommended for designation as SOPI for viewing because, based on Flathead NF observation records and habitat trends, there is not "substantial concern about their capability to persist over the long-term in the plan area." For the western toad, Olive-sided flycatcher, and Black-backed woodpecker a recent increase in wildfires has had a positive effect on habitat suitability. About 90 percent of burned acres on the Flathead NF have not been treated by salvage harvest so they would

provide abundant snags and down logs for these three bird species. In addition, there are numerous observations of these three bird species on Flathead NFS lands in the last 10 years, with distribution in suitable habitat across all GAs. There is currently insufficient information to make an SCC recommendation for the hoary marmot, but MTFWP is conducting surveys and may have more information in the near future.

MTFWP also compiled a climate change risk assessment for wildlife species. Species listed as highly or extremely vulnerable to climate change were also considered for potential SCC and SOPI designation.

Additional Information Specific to Birds

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. A list of neotropical migrants protected by the MBTA is provided in 50 C.F.R. § 10.13. Neotropical migratory birds are found on the Flathead NF during the breeding season and fly to the tropics for winter.

In January 2001, Executive Order 13186 was signed outlining responsibilities of federal agencies to protect migratory birds under the MBTA. As a complimentary measure to the order, the Forest Service and the FWS entered into a memorandum of understanding (MOU) to strengthen migratory bird conservation through enhanced collaboration between the agencies, in coordination with state, tribal, and local governments (USDI-FWS 2008). The MOU serves as guidance for the two federal agencies until more detailed direction is developed following the order. The USDI FWS also published “Birds of Conservation Concern 2008,” (USDI FWS 2008) and recommends that its lists be consulted in accordance with Executive Order 13186.

There are about 250–275 species of birds known to occur on the Flathead NF and a variety of bird assessments were used to screen birds for consideration as Flathead NF potential SCC or SOPI. The first screening occurred at a broad scale—for all bird conservation regions (BCRs) across the U.S., Canada, and northern Mexico. Subsequent screenings occurred at progressively smaller scales.

Several Flathead NF potential SCC are migratory birds. Some of these species also readily move from one ecosystem to another during the breeding season to meet diverse needs for nesting and foraging.

Table D-2 shows the list of neotropical migratory bird species known to occur on the Flathead NF and their association with ecosystems or key ecosystem characteristics.

Table D-2. Neotropical migratory birds on the Flathead NF and key ecosystem characteristics¹.

Common Name (and Status)	Global, State Ranks (MTNHP 2012)	Old Growth	Snag/Dow n Wood	Riparian	Grasslands/fo rbs
American Kestrel	G5, S5		X		X
American Redstart	G5, S5B			X	
American Robin	G5, S5B				X
Bank Swallow	G5, S5B			X	X
Barn Swallow	G5, S5B			X	X
Belted Kingfisher	G5, S5B			X	
Black Swift (SOC)	G4, S1B			X	
Black-chinned Hummingbird	G5, S4B				X
Black-headed Grosbeak	G5, S5B				
Bobolink (SOC)	G5, S3B				X
Brewer's Blackbird	G5, S5B			X	

Common Name (and Status)	Global, State Ranks (MTNHP 2012)	Old Growth	Snag/Dow n Wood	Riparian	Grasslands/fo rbs
Brown-headed Cowbird (not native)	G5, S5B			X	X
Calliope Hummingbird	G5, S5B				
Cassin's Vireo	G5, S4B				
Cedar Waxwing	G5, S5B			X	
Chipping Sparrow	G5, S5B				
Clay-colored Sparrow.	G5, S4B			X	X
Cliff Swallow	G5, S5B			X	X
Common Nighthawk	G5, S5B			X	X
Common Yellowthroat	G5, S5B			X	X
Cordilleran Flycatcher	G5, S4B			X	
Dusky Flycatcher	G5, S5B			X	
Eastern Kingbird	G5, S5B				X
Flammulated Owl (SOC)	G4, S3B	X	X		X
Grasshopper Sparrow (SOC)	G5, S4B				X
Gray Catbird	G5, S5B				X
Hammond's Flycatcher	G5, S4B	X			
Hermit Thrush	G5, S5B	X		X	
House Wren	G5, S5B		X		
Lazuli Bunting	G5, S4B				
Least Flycatcher	G5, S5B			X	
Lincoln's Sparrow	G5, S5B			X	
MacGillvray's Warbler	G5, S5B			X	
Merlin	G5, S4			X	X
Nashville Warbler	G5, S5B			X	
Northern Rough-winged Swallow	G5, S5B			X	X
Northern Waterthrush	G5, S5B		X	X	
Olive-sided Flycatcher	G4, S4B			X	X
Orange-crowned Warbler	G5, S5B			X	
Osprey	G5, S5B		X	X	
Peregrine Falcon (SOC)	G5, S3			X	X
Red-eyed Vireo	G5, S4B				
Red-naped Sapsucker	G5, S4B		X	X	
Red-winged Blackbird	G5, S5B			X	X
Rose-breasted Grosbeak	G5, SNA				
Ruby-crowned Kinglet	G5, S5B				
Rufous Hummingbird	G5, S4B				X
Savannah Sparrow	G5, S5B				X
Say's Phoebe	G5, S5B				X
Swainson's Hawk	G5, S4B				X
Swainson's Thrush	G5, S5B	X	X		
Tennessee Warbler	G5, S3B			X	X

Common Name (and Status)	Global, State Ranks (MTNHP 2012)	Old Growth	Snag/Dow n Wood	Riparian	Grasslands/fo rbs
Townsend's Warbler	G5, S5B	X		X	
Tree Swallow	G5, S5B		X	X	X
Turkey Vulture	G5, S4B				X
Vaux's Swift	G5, S4B	X	X		X
Veery (SOC)	G5, S3B			X	
Vesper Sparrow	G5, S5B				X
Violet-green Swallow	G5, S5B		X	X	X
Warbling Vireo	G5, S5B			X	
Western Kingbird	G5, S5B			X	X
Western Tanager	G5, S5B				
Western Wood-Pewee	G5, S5B			X	
White-throated Swift	G5, S5B			X	X
Williamson's Sapsucker	G5, S4B		X		
Willow Flycatcher	G5, S4B			X	
Wilson's Warbler	G5, S5B		X	X	
Yellow Warbler	G5, S5B			X	
Yellow-breasted Chat	G5, S5B			X	
Yellow-headed Blackbird	G5, S5B			X	X

¹Species list originally from Finch (1991). Additional species, NHP rankings, distribution, and habitat information are from Montana Field Guide (<http://fieldguide.mt.gov/default.aspx>) and Montana Natural Heritage Program's Species of Concern list (<http://mtnhp.org/SpeciesOfConcern/?AorP=a>) as of July 2012.

X = associated habitat component; SOC = Montana Species of Concern Montana Natural Heritage Program Ranks are described in the tables below. B = State rank modifier indicating breeding for a migratory species; SNA = A conservation status rank is not applicable because either the taxa is of hybrid origin, is exotic, introduced, or accidental, it is not confidently present in the state.

The majority of neotropical migrant bird species are believed to be secure and their habitat has been maintained by existing Flathead NF plan direction. For example, species associated with old growth, snags, and down woody material use habitats protected by Flathead NF Plan amendment 21. Species associated with key riparian components use habitats protected by riparian habitat conservation area (RHCA) direction. Neotropical migrant bird species that may have declining trends are discussed in the following sections.

Large-scale Assessment: Bird Conservation Region 10

As shown in figure D-2, the Flathead NF lies within BCR 10 (Northern Rockies). Table D-2 lists the species of concern for BCR10.

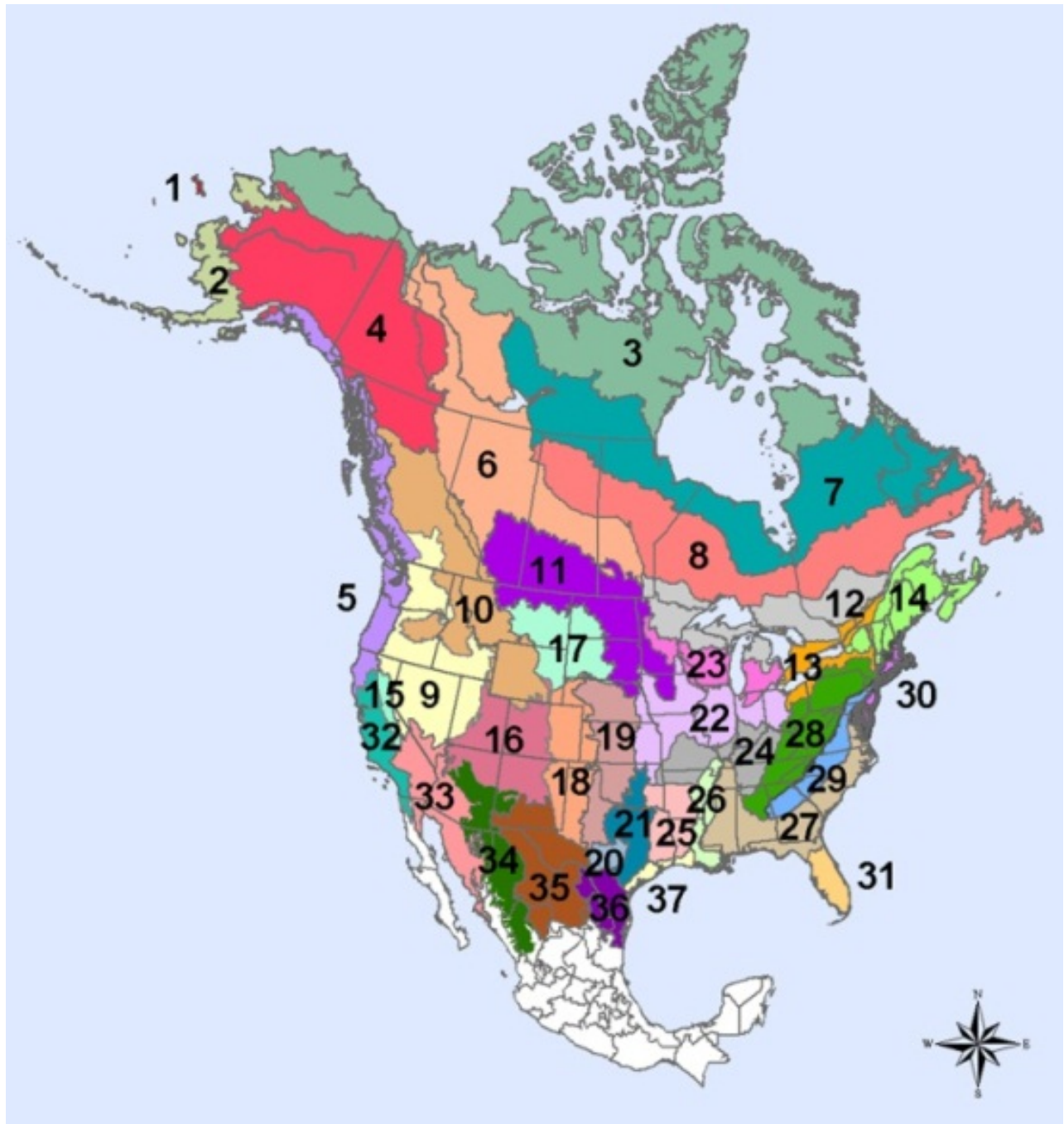


Figure D-2. Bird Conservation Regions (source: North American Bird Conservation Initiative)

Table D-2. Birds of Conservation Concern for BCR10, Northern Rockies

Common Name	Scientific Name	Is the Flathead NF w/in the Range of this Species ¹ ?	Is there evidence of occurrence on Flathead NF lands in the last 10 years ² ?
Bald eagle	<i>Haliaeetus leucocephalus</i>	Y	Y
Black rosy-Finch	<i>Leucosticte atrata</i>	N	N
Black swift	<i>Cypseloides niger</i>	Y	Y
Brewer's sparrow	<i>Spizella breweri</i>	Y	N- Flathead Valley only
Calliope hummingbird	<i>Stellula calliope</i>	Y	Y
Cassin's finch	<i>Carpodacus cassinii</i>	Y	Y
Ferruginous hawk	<i>Buteo regalis</i>	Y	N- Flathead Valley only
Flammulated owl	<i>Otus flammeolus</i>	Y	Y
Lewis's woodpecker	<i>Melanerpes lewis</i>	Y	N- Flathead Valley only
Loggerhead shrike	<i>Lanius ludovicianus</i>	Y (migratory only)	N
Long-Billed curlew	<i>Numenius americanus</i>	Y	N- Flathead Valley only
McCown's longspur	<i>Calcarius mccownii</i>	N	N
Olive-Sided flycatcher	<i>Contopus cooperi</i>	Y	Y
Peregrine falcon	<i>Falco peregrinus</i>	Y	Y
Sage sparrow	<i>Amphispiza belli</i>	N	N
Sage thrasher	<i>Oreoscoptes montanus</i>	N	N
Swainson's hawk	<i>Buteo swainsoni</i>	Y	N- Flathead Valley only
Upland sandpiper	<i>Bartramia longicauda</i>	Y (migratory only)	N – in River only

1. Based on Montana Field Guide range maps <http://fieldguide.mt.gov/default.aspx>

2. Based on a query of the Montana Natural Heritage Program database for the Flathead NF (K. Coleman 2013 birdbod data).

Table data from USDI FWS 2008

An additional assessment for BCR10 was examined to look at trends (Sauer et al. 2014). The following bird species are known to breed on the Flathead NF, show significant declines on breeding bird surveys when compiled across BCR10, have high confidence in the data, and have low relative abundance (less than 5.0). The following species are listed in table D-2, have been observed on Flathead NF lands in the last 10 years, and have declining trends in BCR10:

- Cassin's finch
- Olive-sided flycatcher
- Red-eyed vireo
- Veery

Additional information considered for screening of bird species included local research on species with low populations or restricted habitat in the plan area, species are at the edge of their range or with disjunct populations, or species with significant threats to populations or habitats on and off the plan area (FSH 1909.12, Chapter 10, section 12.52). These additional species include:

- Clark's nutcracker
- White-tailed ptarmigan

All of the species listed in this appendix were considered for inclusion as potential SCC. Those recommended for SCC or SOPI designation are included in the Flathead NF assessment document. Those reviewed but with no recommendation for special designation are discussed below.

Birds

Brown Creeper (*Certhia Americana*):

Potential designation under the revised Flathead NF Forest Plan: No special designation recommended.

Rationale for potential species designation:

- MT SOC, S3
- Over 150 documented observations within Flathead NF GAs in the last 10 years. BCR10 information does not indicate a decline in the brown creeper.

Ecological systems/species habitat associations and trends:

- Adams and Morrison (1993) found low Creeper abundance in forests characterized by low diversity of stand structure and tree species. Hutto (1995) found that they were closely associated with undisturbed old growth coniferous forest types, predominantly cedar-hemlock, but also in spruce-fir, ponderosa pine, mixed conifer, Douglas-fir and lodgepole pine. The species is also known to nest in old-growth black cottonwood gallery forests in the region (D. Casey, pers. comm.) Hejl and Paige (1994) and Hejl et al. (1995) also found that Creepers were much less abundant in clearcuts or partially logged forests. Both Aney (1984) and Franzreb (1985) considered Creepers to be a forest interior nesting species sensitive to forest fragmentation. Temple (1986) found that forest interior species were associated with habitats that had a core area more than 100 meters from high contrast edge.

Existing coarse filter plan components that help meet the needs of this species are as follows:

- Meet amendment 21 direction for old growth and snags. If old growth is not within 75 percent of mean of HRV (as displayed by sub-basin in amendment 21 FEIS) maintain stands with individual components of old growth to achieve minimum for 75 percent of mean HRV, as directed by amendment 21.

Calliope hummingbird (*Selasphorus calliope*)

Potential designation under the revised Flathead NF Forest Plan: No special designation recommended.

Rationale for potential species designation:

- S5B
- Secure in Montana according to MTNHP. Populations are increasing according to Montana P IF (2000).

Ecological systems/species habitat associations and trends:

- The Calliope Hummingbird is restricted to the montane regions of western and south central Montana. Calliopes occur between 1200 and 3400 m elevations. Hummingbirds in Montana use regrowth areas after logging or fire (shrub-sapling seral stage from 8 to 15 years old) for nesting and tend to establish territories in open shrub areas with viewing posts. They also establish territories along open willow/shrub drainages.

Cassin's Finch (*Haemorhous cassinii*)

Potential designation under the revised Flathead NF Forest Plan: No special designation recommended.

Rationale for potential species designation:

- MT SOC, S3, PIF priority III

- Over 80 documented observations within Flathead NF GAs in the last 10 years, mostly on private, valley-bottom lands.
- Bird of Conservation Concern in BCR10

Ecological systems/species habitat associations and trends:

- Open ponderosa pine forests and secondly in Douglas-fir types or mixed coniferous forests. Post-fire habitats and selectively logged sites are used extensively.

There has been a large increase in acres burned on the Flathead NF in recent decades, as well as reduction of the understory in mixed coniferous forests within the Wildland Urban Interface. Only about 10 percent of the burned area has undergone salvage harvest.

Existing coarse filter plan components that help meet the needs of this species are as follows:

- Meet A21 direction for old growth and snags. If old growth is not within 75 percent of mean of HRV (as displayed by sub-basin in A21 FEIS) maintain stands with individual components of old growth to achieve minimum for 75 percent of mean HRV, as directed by amendment 21.
- The desired condition is to restore open understory conditions in stands of the largest ponderosa pine and Douglas-fir, plus maintain large snags and decayed trees, as allowed under amendment 21. This would help meet the needs of Cassin's finches, Flammulated owls, Lewis's woodpeckers, Williamson's sapsuckers, and Pygmy nuthatches.

Gray-crowned Rosy-Finch (*Leucosticte tephrocotis*)

Potential designation under the revised Flathead NF Forest Plan: No special designation recommended

Rationale for potential species designation:

- MT SOC, S2B
- Rated as highly vulnerable to climate change by MTFWP.
- Flocks of Gray-crowned rosy finches are frequently observed in the Bob Marshall Wilderness Complex wherever snow remains in the June and July time period (Hans Castren pers. comm. 2013).

Ecological systems/species habitat associations and trends:

- The species is highly associated with alpine habitats, nesting in cliffs and talus among glaciers and snowfields above timberline with foraging in adjacent areas. MTNHP habitat model includes all suitable alpine cover types that have been mapped. The map output appears appropriate and the AVI (82 percent of breeding records) supports this. All model types predict presence of optimum habitat in wilderness portions of the Flathead NF (primarily in Flathead and Powell Counties). MTNHP and USFS observations of Gray-crowned rosy finches on the Flathead NF correlate well with the model of wolverine habitat, where persistent spring snow occurs at least six out of 7 years. These areas generally maintain snow through June or early July.

1986 Flathead NF plan components, as amended:

- Refugia that are within the species current range: refugia for the Gray-crowned rosy finch are associated with high elevation habitats that are largely located within wilderness areas on the Flathead NF, as well as adjacent Lolo NF, Lewis and Clark NF, and Glacier NP.

- Movement paths: Gray-crowned rosy finches are songbirds capable of long distance movements, so specific movement paths are not a concern.

Lewis's Woodpecker (*Melanerpes lewis*)

Potential designation under the revised Flathead NF Forest Plan: No special designation recommended.

Rationale for potential species designation:

- MT SOC, S2B, PIF priority II
- Listed as a Flathead NF A21 old growth associate. Existing amendment 21 management direction and coarse filter ecosystem restoration management strategies should help meet the needs of this species.
- Has a long-term significantly declining trend in the Northern Rockies (Casey et al. 2013). One documented observation within Flathead NF GAs in last 10 years. Most observations and nesting sites are in the valley bottoms, not on NSF lands.

Ecological systems/species habitat associations and trends:

- Soft snag cavity nester confined to relatively few habitats at lower elevations with a strong link to the distribution of older-aged, open-canopied ponderosa pine stands and riparian stands of large black cottonwood trees. In addition, Lewis's woodpeckers were abundant in an 18-year-old burn of mature Douglas-fir forest (once shrub layer develops for fly-catching). More natural, open parkland conditions dominated by large, mature trees would benefit this species (Casey et al. 2013). In the Bitterroot Valley of Montana, they nested in ponderosa Pine snags (moderate decay, class 3-4) or dead-topped live trees with a mean diameter at breast height (d.b.h.) of 41.5 in. In burned forests of central Idaho, they favored partially logged areas to unlogged areas and the mean d.b.h. of nest trees was 20 in d.b.h..
- Casey (2013) recommends restoration and management activities for ponderosa pine habitat including thinning the degraded, dense, mixed-conifer forests that were historically ponderosa pine to promote the historic canopy and understory conditions with which the species evolved. These can be highly variable, from the open savannah conditions preferred by Lewis's Woodpecker and Western and Mountain Bluebirds to the more closed canopies used by the Williamson's Sapsucker, Pygmy and White-breasted Nuthatch. Shrub cover in the understory can be important for Lewis's Woodpecker by providing a substrate for insect productivity to support its aerial flycatching. Retaining and recruiting large diameter snags and live trees, (especially those >21 inches diameter at breast height d.b.h.) is also important.
- Optimal Breeding Habitat:
 - Open ponderosa
 - pine forest with <30 percent canopy cover, >50 percent shrub cover, (>0.40/soft snags/ac) >21 inches
 - DBH. and >30 ft. tall with >1 soft snag/ac. >32 in d.b.h. (Casey 2013).

Existing coarse filter plan components that help meet the needs of this species are as follows:

- Amendment 21 direction for old growth and snags. If OG is not within 75 percent of mean of historic range of variation (HRV, as displayed by sub-basin in amendment 21 of the final environmental impact statement (FEIS)) maintain stands with individual components of old growth to achieve minimum for 75 percent of mean HRV, as directed by amendment 21.
- The desired condition is to restore open understory conditions in stands of the largest ponderosa pine and Douglas-fir, plus maintain large snags and decayed trees, as allowed under amendment 21. This

would help meet the needs of Cassin's finches, Flammulated owls, Lewis's woodpeckers, Williamson's sapsuckers, and Pygmy nuthatches.

Peregrine Falcon (*Falco peregrinus*)

Potential designation under the revised Flathead NF Forest Plan: Delisted in 1999 with 15 years of monitoring specified - No special designation recommended.

Rationale for potential species designation:

- MT SOC, S3, BCC in BCR10, PIF priority II
- A Sensitive Species on the FLATHEAD NF under the 1986 Forest Plan, as amended.
- The Flathead NF is cooperating in continued monitoring of known territories as well as potential territories, with the goal of maintaining a stable or increasing nesting population in the state.
- The Peregrine Falcon was removed from the federal list of Threatened and Endangered Species in 1999 (USDI FWS 1999). In 1970 they showed population declines of 80-90 percent in the western United States. By 2003 there were an estimated 1,000 pairs in the western United States, excluding Alaska (USDI FWS 2006).

Ecological systems/species habitat associations and trends:

- Nests typically are situated on ledges of vertical cliffs, often with a sheltering overhang. Ideal locations include undisturbed areas with a wide view, near water, and close to plentiful prey. Peregrine Falcons feed primarily on birds. They have occasionally been reported to prey on small mammals (e.g., bats, lemmings), lizards, fishes, or insects (by young birds). Prey is pursued from a perch or while soaring. Peregrine falcons may hunt up to several kilometers from their nest site. Some pairs are tolerant of human disturbance, while too much disturbance during the nesting season can cause nest abandonment for some pairs (USDI FWS 1977). Pesticides are still a potential threat to the species in North America and in wintering areas in South America.

1986 Flathead NF plan components, as amended:

- Assessment: There are three known nesting sites within the administrative boundary of the Flathead NF- all on cliffs. These sites are monitored by the Montana Peregrine Institute (2010).

Existing coarse filter plan components that help meet the needs of this species are as follows:

- Riparian and stream protective measures including the INFISH strategy, the SMZ Law, Montana Water Quality Act, and Clean Water Act. This management direction applies at small scales as well as the larger scale (Region 1 and state of Montana). Site specifically, this direction applies to all areas within 300 feet of fish-bearing stream; within 150 feet of perennial non-fish bearing streams and wetlands greater than 1 acre; and 50 feet for intermittent streams. RHCAs identified at the project level help to protect the feeding needs of this species.
- Direction on page II-36 of the Flathead NF plan that applies to nest sites.

Red-eyed Vireo

Potential Designation under the revised Flathead NF Forest Plan: No special designation recommended

Rational for potential species designation:

- G5, S4B, PIF priority II
- About 25 documented observations within Flathead NF GAs in last 10 years. On the Flathead NF, Hutto reported 29 birds on 50 transects of 10 points each, counted from 1994 to 2004. Hutto reported 10 birds on point counts in the Meadow-Smith area of the Swan Valley GA from 2008 to 2012.
- This species is one of many neotropical migrant, insectivorous species showing declines, and a priority for conservation planning by PIF (D. Casey pers. comm. 2013).
- The Flathead NF cannot control activities in the tropical areas where this species winters.

Ecological systems/species habitat associations and trends:

- Nests are in the terminal or sub-terminal fork of a branch in live midstory to understory tree or shrub in deciduous and mixed deciduous-coniferous forest. Absent from sites where understory shrubs are sparse or lacking. Is a riparian associate often found near small openings in forest canopy. The species is vulnerable to nest parasitism. Grazing in or adjacent to riparian forests affects them by removing the shrub understory and by attracting cowbirds. Protection of the canopy and provision for cottonwood recruitment combined with livestock management should provide for this species over the long term.

Mammals

Black bear (*Ursus Americana*)

Potential designation under the revised Flathead NF Forest Plan: No special designation recommended.

Rational for potential species designation:

- G5, S5
- Over 175 documented observations within all Flathead NF Geographic Areas in last 10 years, according to a MTNHP database query.

The mean population estimate for black bears in Montana is 13,307 black bears, with a density ranging from 8.8 to 19.1 bears/100 km². Black bear density in Hunting District 130 (Swan River Valley) was higher than all other sampled areas outside Glacier NP; 22.7 bears/100 km²). Mace and Chilton-Radant (2011) found a significant positive relationship between bear density and mean annual precipitation. Approximately 1,000 black bears are harvested annually in Montana during the spring and fall hunting seasons, without the use of baits or hounds. All or portions of five black bear hunting districts occur on the Flathead NF, with a total of 117 black bears harvested in 2013. Northwest black bear populations are believed to be stable to increasing (Mace and Chilton-Radant 2011).

Ecological systems/species habitat associations and trends:

- MTFWP (2011) approximated the year-round distribution of black bears in Montana using regional MTFWP wildlife biologists familiar with bear habits, movements, and historical harvest locations. The total extent of black bear habitat within the state is approximately 116,554 km², most of which is within Region 1 (northwest Montana).
- Black bears are most widely distributed in MTFWP Region 1 and have the highest density in the moist, coniferous habitats of northwestern Montana. Black bears may occur in the intermountain valleys which are used to travel to preferred habitats, and at times bears may be attracted to both natural and unnatural food sources on private lands in these low elevation areas.

1986 Flathead NF plan components, as amended:

- Flathead NF plan direction for other species such as deer, elk, and grizzly bear generally meets the needs of this species.

Hoary Marmot (*Marmota caligata*)

Potential designation under the revised Flathead NF Forest Plan: No special designation recommended.

Rational for potential species designation

- MT PSOC, G5, S3S4
- Occurs at low densities throughout high elevations of western Montana. The MTNHP records 45 known observations on Flathead NF, mainly in North Fork and South Fork GAs; 34 of these observations were in the last 10 years.

Not much is known about breeding populations or locations of this species in Montana, so it is identified as a species of inventory need by MTNHP. MTFWP Region1 is conducting surveys, including non-invasive sampling for DNA analysis.

Ecological systems/species habitat associations and trends:

- Hoary marmots hibernate underneath big rocks (larger than talus) for up to 7-8 months a year. In summer they use rocky terrain or alpine meadows dominated by grasses, sedges, herbs, and Krummholz forest patches with bulbs and berries. They live in a colony which may include a dominant, adult male, up to three adult females, sometimes with a subordinate adult male, and a number of young and subadults up to two years of age. Each colony typically maintains a single hibernaculum and a number of smaller burrows, used for sleeping and refuge from predators. Burrows may be in rocks or may be dug. Hoary marmots are prey for species such as wolverines and eagles.

1986 Flathead NF plan components, as amended:

- Much of the habitat for this species is protected within wilderness and inventoried roadless areas as well as grizzly bear security core habitat.

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